WHAT IS CLAIMED IS

1. A signal coding method comprising:

a step of determining a coding difficulty for each unit time of an input signal;

a step of interrelating an allocation sign amount for each unit time with a coding difficulty which has been standardized in advance using an ordinary input signal of the type to which said input signal belongs, so as to obtain a reference value of said allocation sign amount interrelated with said coding difficulty of said input signal for said each unit time;

a step of modifying said reference value of said allocation sign amount into an actual allocation sign amount; and

a step of creating a coded data by coding said input signal for said each unit time according to said actual allocation coding amount.

2. A signal coding method as claimed in Claim 1, wherein said step of modifying said reference value of said allocation sign amount into an actual allocation sign amount is carried out by controlling the actual allocation bit amount, so that a total of a bit amount generated when a signal of a time length which can be recorded on a recording medium is equal to or below a bit amount available in the recording medium for signal recording.

3. A signal coding method as claimed in Claim 1, wherein

said step of modifying said reference value of said allocation sign amount into an actual allocation sign amount is characterized in that a total B av of allocation bit amount up to now is compared to a total B gen of actually generated coding bit amount up to now while coding the input signal for each unit time with a constant allocation bit amount b av, and if a value (B av - B gen) is positive, it is allowed to assign an allocation bit amount equal to or above b av which is defined as follows:

b av = T GOP x BV/T SEQ

wherein

BV is a bit amount available in a signal recording medium for a moving picture recording;

G SEQ is a time length of a moving picture sequence which can be recorded on a signal recording medium; and

T GOP is a unit time length.

4. A signal coding method as claimed in Claim 3, wherein in case of coding a signal and recording the coded signal onto a recording medium in several times, said value (B av - B gen) or a value equivalent to said value is recorded on said recording medium, so that when a signal is recorded in an empty area of said recording medium next time, prior to signal recording, said value (B av - B gen) or the value equivalent to said value is read out from said recording medium, according to which value an allocation bit amount of an input signal is calculated for each unit time.

5. A signal coding method as claimed in Claim 1, wherein said input signal is subjected to a pre-filter processing according to an information used when modifying said reference value of the allocation sign amount into an actual allocation sign amount, and said signal processed is coded.

6. A signal coding method as claimed in Claim 5, wherein said pre-filter processing carries out a low-pass filter processing to an input image when suppressing said actual allocation sign amount below said reference value of the allocation sign amount.

7. A signal coding method as claimed in Claim 1, wherein in case that said input signal is a moving picture image signal, said coding difficulty is determined according to an image characteristic information of said input image for each predetermined period of time and coding is carried out with an allocation sign amount reflecting human visual characteristic based on said image characteristic information.

8. A signal coding apparatus comprising:

coding difficulty calculating means for determining a coding difficulty for each unit time of an input signal;

allocation sign amount reference value calculating means for interrelating an allocation sign amount for each unit time with a coding difficulty which has been standardized in advance using an ordinary input signal of the type to which said input

signal belongs, so as to obtain a reference value of said allocation sign amount interrelated with said coding difficulty of said input signal for said each unit time;

means for modifying said reference value of said allocation sign amount into an actual allocation sign amount; and

coding means for creating a coded data by coding said input signal for said each unit time according to said actual allocation coding amount.

9. A signal coding apparatus as claimed in Claim 8, wherein said means for modifying said reference value of said allocation sign amount into an actual allocation sign amount controls the actual allocation bit amount, so that a total of a bit amount generated when a signal of a time length which can be recorded on a recording medium is equal to or below a bit amount available in the recording medium for signal recording.

10. A signal coding apparatus as claimed in Claim 8, wherein said means for modifying said reference value of said allocation sign amount into an actual allocation sign amount is characterized in that a total B av of allocation bit amount up to now is compared to a total B gen of actually generated coding bit amount up to now while coding the input signal for each unit time with a constant allocation bit amount b av, and if a value (B av - B gen) is positive, it is allowed to assign an allocation bit amount equal to or above b av which is

defined as follows:

b av = T GOP x BV/T SEQ

wherein

BV is a bit amount available in a signal recording medium for a moving picture recording;

G SEQ is a time length of a moving picture sequence which can be recorded on a signal recording medium; and

T GOP is a unit time length.

11. A signal coding apparatus as claimed in Claim 9, said apparatus further comprising pre-filter means for a pre-filter processing to said input signal, which filter means carries out a low-pass filter processing to an input image when suppressing said actual allocation sign amount below the reference value of the allocation sign amount.

12. A signal recording medium on which a coded signal is to be recorded, wherein said coded signal is obtained by:

a step of determining a coding difficulty for each unit time of an input signal;

a step of interrelating an allocation sign amount for each unit time with a coding difficulty which has been standardized in advance using an ordinary input signal of the type to which said input signal belongs, so as to obtain a reference value of said allocation sign amount interrelated with said coding difficulty of said input signal for said each unit time;

a step of modifying said reference value of said

allocation sign amount into an actual allocation sign amount; and

a step of creating a coded data by coding said input signal for said each unit time according to said actual allocation coding amount.

13. A signal recording medium as claimed in Claim 12, wherein said step of modifying said reference value of said allocation sign amount into an actual allocation sign amount is characterized in that a total B av of allocation bit amount up to now is compared to a total B gen of actually generated coding bit amount up to now while coding the input signal for each unit time with a constant allocation bit amount b av, and if a value (B av - B gen) is positive, it is allowed to assign an allocation bit amount equal to or above b av which is defined as follows:

b av = T GOP x BV/T SEQ

wherein

BV is a bit amount available in a signal recording medium for a moving picture recording;

G SEQ is a time length of a moving picture sequence which can be recorded on a signal recording medium; and

T GOP is a unit time length.

14. A signal recording medium as claimed in Claim 13, wherein in case of coding a signal and recording the coded signal onto a recording medium in several times, said value (B

av - B gen) or a value equivalent to said value is recorded on said recording medium, so that when a signal is recorded in an empty area of said recording medium next time, prior to signal recording, said value (B av - B gen) or the value equivalent to said value is read out from said recording medium, according to which value an allocation bit amount of an input signal is calculated for each unit time.

15. A signal transmission method comprising:

a step of determining a coding difficulty for each unit time of an input signal;

a step of interrelating an allocation sign amount for each unit time with a coding difficulty which has been standardized in advance using an ordinary input signal of the type to which said input signal belongs, so as to obtain a reference value of said allocation sign amount interrelated with said coding difficulty of said input signal for said each unit time;

a step of modifying said reference value of said allocation sign amount into an actual allocation sign amount;

a step of creating a coded data by coding said input signal for said each unit time according to said actual allocation coding amount; and

a step of transmitting said created coded data.

16. A signal transmission method as claimed in Claim 15, wherein said input signal is subjected to a pre-filter processing according to an information used when modifying said

reference value of the allocation sign amount into an actual allocation sign amount, and said signal processed is coded.

17. A signal transmission method as claimed in Claim 16, wherein said pre-filter processing carries out a low-pass filter processing to an input image when suppressing said actual allocation sign amount below said reference value of the allocation sign amount.

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FOR EXAMINATION PURPOSES